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ABSTRACT

Writing samples of 50 learning disabled college students were analyzed for fluency and errors of 14 types: omission of words and/or letters, noun plurals, syntax, subject-verb agreement, verb forms and tense, pronoun reference, shifts in person, fused or spliced sentences, fragments, punctuation, capitalization, usage, spelling, and apostrophe use. Results revealed that errors occurred most frequently in categories of spelling, punctuation, fused/spliced sentences, and confusing syntax. The most obvious common weakness was lack of fluency (as measured by word count). Implications for remedial programs include developing materials which teach to both halves of the brain at once; encouraging fluency through such activities as ungraded writing and journal writing; and subordinating the study of grammar to the elimination of error in students' work. (CL)

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AN ANALYSIS OF WRITING PROBLEMS OF DEVELOPMENTALLY DISABLED COLLEGE STUDENTS

LEARNING THEORY AND APPLICATIONS

by

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ABSTRACT

In an attempt to understand more fully the writing problems of learning disabled students, with the eventual aim of developing appropriate teaching methods for them, a study was conducted to analyze the types of writing weaknesses or errors which characterize such students' work. Papers of fifty Bakersfield College students who entered a special program for the learning disabled during the years 1975-76 and 1976-77 were analyzed for fluency (number of words written in forty minutes) and the following types of error: omission of words and/or letters, noun plurals, syntax, subject-verb agreement, verb forms and tense, pronoun reference, shifts in person, fused or spliced sentences, fragments, punctuation, capitalization, usage, spelling, and apostrophe errors. Analysis showed that errors occurred most frequently in the categories of spelling, punctuation, fused/spliced sentences, and confusing syntax. Fluency ranged from 18 to 300 words, with an average of 101 words in length. Average errors per paper totaled 10.78.

Recommendations for helping students increase fluency and decrease error arose as much from current literature in composition and learning theory as from the study itself. Since greater proofreading skill would reduce errors in the five categories which produced 47% of the errors, more emphasis on proofreading was recommended. Other recommendations included minimizing study of grammar and maximizing actual writing practice; techniques such as sentence combining as an alternative to grammatical analysis, more reading aloud, rewards for a developing series of drafts rather than just one grade, and activities which involve both sides of the brain.

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INTRODUCTION

As colleges make way for more and more students who are handicapped, learning disabled, and academically underprepared, teachers face an urgent need to retrain themselves. Few college teachers have been trained to instruct students with learning difficulties, students whose writing is so unconventional as to be virtually incomprehensible, or students who may not know enough phonics to pass a college remedial course in spelling. With this re-training comes a corresponding need to know how the non-traditional students differ from traditional ones. Do they tend to make the same kinds of errors, only more of them? Or do the writing problems of the non-traditional students seem to differ markedly and thus require a very different kind of pedagogy from that which has been used with the traditinnal students?

The purpose of this practicum was to discover what kinds of writing problems occur most frequently in the writing of the lowest level remedial students at Bakersfield College. An analytical design was therefore chosen for the study. It addressed the above problem by examining fifty compositions of remedial students, written upon entrance into a special program for the learning disabled. The compositions were analyzed for fluency (measured by a simple word count), and the types of errors made were classified into categories. The classification served two purposes: (1) the most frequently made errors could be presumed to be those which are in most urgent need of attention, thus making instruction more relevant and

economical; (2) the data could be used to encourage students who may be making large numbers of errors, yet relatively few types of errors, to convince them that mastery over most error is attainable for them.

BACKGROUND AND SIGNIFICANCE

The findings of this study, when combined with sound principles of learning theory, have application for improvement of instruction. For example, one characteristic of the writing of learning disabled students was a lack of fluency; in a forty-minute period they produced an average of 101 words compared to an average of 300 words for traditional students (Shaughnessy, 1977). This lack of fluency may be due in part to poor psychomotor coordination (insufficient practice with the physical process of writing), but another factor might very well be anxiety (fear of making mistakes generalized into fear of the total writing situation). A strategy for overcoming these difficulties and improving fluency should take into account the principles of habit formation established by the associationists, the knowledge of sources of anxiety contributed by the cognitive theorists, and the importance of self-concept as emphasized by humanistic theorists. Although the research portion of this practicum is limited to analysis and classification of writing problems, recommendations for remediation of those problems draw heavily upon learning theory and its practical applications.

The need for studies of this type is borne out by the current literature. Even the popular press is alarmed over declining writing skills, stirring a public clamor for "back to basics." Jim Corder has summarized the flurry of protest articles which have been bombarding us with outrage since 1975:

> On August 25, 1975, Time reported, under the title "Can't Anyone Here Speak English?", on the dreadful state of literacy in the land....Newsweek emblazoned across its December 8, 1975 cover the title "Why Johnny Can't Write," and said inside that the educational system is "spawning a generation of semi-literates." The Dallas Times Herald for February 1, 1976, said that Americans are "facing a national crisis in literacy".... The September, 1976, issue of Harper's includes an article by Gene Lyons entitled "The Higher Illiteracy," which proclaims that college English departments are the chief chauffeurs of the country's drive toward illiteracy: "American students are not learning how to write because nobody bothers to teach them how." (4:475)

Responding with understandable defensiveness, English teachers from high schools and colleges have raised the question, "just what is basic?" Burton Cox (1978) typifies this reaction by deploring the emphasis on "basics" which are mere trivia of punctuation, spelling, and capitalization, as well as the teaching of grammar for its own sake. Instead, he recommends that we look at the writing itself before we launch ourselves into a pointless struggle with dull and irrelevant mechanics. (5:10)

Those who have indeed looked at "the writing itself" have come to some disheartening conclusions. They find a discrepancy between the objectionable features in student writing (errors) and the kinds of treatment teachers and publishers have been prescribing (usually abstract grammar). John Higgins (1973) analyzed 100 sample placement themes by high school graduates for sentence structure and mechanics. He classified 26 types of error which occurred in 30% of the papers; at the top were misspelling, inappropriate contraction, wrong use of "get," missing commas with parentetical elements and after introductory adverbial modifiers, redundancy, missing apostrophe, poor subordination,poor coordination, and pronoun reference errors. To overcome four out of the five most common weaknesses and half of all the faults in the table, he said, the student

does not need a knowledge of grammar. Furthermore, Higgins observed, six widely used remedial texts do not adequately address the actual kinds of student error. He particularly deplored the absence of treatment of general proofreading skills in the remedial texts, since proofreading incompetence causes most of the word omissions and substitutions.

An even more impressive analysis of student error is presented in Mina Shaughnessy's 1977 book Errors and Expectations. After analyzing 4000 essays by entering freshmen at City University of New York, she, too, concluded that students need to be strengthened in proofreading skills. Her discussion of proofreading as perception suggests a foundation in cognitive learning theory:

> The perceptual difficulties that keep students from seeing what they already know to be erroneous will also keep them from incorporating new forms into their writing. Thus proofreading becomes an indispensable aid to the mastery of grammar. It may well be that traditional grammar-teaching has failed to improve writing not because rules and concepts do not connect with the act of writing but because grammar books ... by highlighting the feature being studied, rob the student of any practice in seeing that feature in more natural places. (21:155)

Shaughnessy also recommends the inductive teaching of sentence structure, building up sentences by adding to a subject-verb base, to help students gain an insight into how sentences are formed (21:[illegible]). This can result in a valuable concept, she says—the perception of a sentence as a structure rather than a string of words—which will help both his proofreading and his writing. She believes that punctuation should not be isolated from the dynamics of composition, for the process whereby writers mark sentences is related to the process whereby they make them.

The question of grammar—the extent to which it is appropriate to the teaching of writing—dominates much of the literature on composition of recent years. Buckly (1975) reports dissatisfaction with a

grammar component of a programmed approach to remedial writing; Petrosky (1977) cites two previous studies which concluded that grammar study is useless for the improvement of writing:

> Representative of the best kind of thoroughly designed educational research, the Harris (1962) and Elley (1976) studies of the role of grammar in the secondary English curriculum...both reached the same conclusion: no empirical evidence exists for teaching grammar for any purpose. (18:86)

In fact, Petrosky says, the study of grammar takes time away from needed writing practice, a conclusion echoed by D'Eloia (1977):

> If there is one conclusion to be drawn which cuts across all the studies, it is this: the more time spent analyzing grammar as grammar, the less time spent writing; the less time spent writing, the less the improvement in the written product. (8:1)

But D'Eloia does not feel that grammar should be scrapped entirely--merely subordinated to the study of error. At the same time the instructor is minimizing the time devoted to grammar, she says, he must be careful to teach whatever makes standard English predictable for the student. (8:8)

Further evidence of the failure of traditional methods to help students overcome writing errors has been revealed in a study by Andrea Lunsford (1978), though she also reports success with an experimental group which used techniques of sentence-combining and inference-drawing. After nine weeks of intensive training, the experimental group (composed of 92 students who scored below 10 on the A.C.T. test) improved measurably in almost every area of instruction, but the control group in a regular freshman English course had not changed perceptibly (and even more shocking was the fact that a group who had taken no English performed better than those in the regular course). Lunsford concludes that grammar is effective only when related to the student's own writing. As for the study of errors, moderation is the key:

> The teacher who attempts to attack all error at once will only confuse and discourage the student....Nevertheless, most remedial writing students are greatly concerned with error and view the teacher's avoidance of it as a general cop-out or a tacit admission of defeat. (8:50)

Some instructors, however, deplore any kind of emphasis on error. Typical of this school of thought, Mary Denman (1978) advocates humanistic, non-cognitive processes to reduce anxiety, promote affiliation, and provide opportunities for success. The influence of humanistic learning theory upon Denman is obvious as she describes her techniques for extracting positive comments from class members; she permits no adverse criticism, no suggestions for improvement—only acknowledgments of the "strong points" of the essay. She does not make it clear, however, how the class learns to identify what the "strong points" are, nor does she explain just how the students' positive feelings about their work translate into writing that the world would recognize as "improved."

Fortunately, the instructor can be eclectic, using Denman's approach without being limited to it. This non-cognitive approach probably falls into the third category of approaches summarized by Mina Shaughnessy in Errors and Expectations:

> When academically ill-prepared young adults write,...they often mismanage complexity. This mismanagement gets explained in different ways. One explanation focuses on what the student has not internalized in the way of language patterns...another on his unfamiliarity with the composing process, and another on his attitude toward himself in an academic setting. (21:73)

Each explanation suggests a pedagogy, says Shaughnessy; the first one stresses grammar; the second one stresses free writing with minimal study of grammar; the third one stresses confidence, dismissing concerns with form or process. But each of these pedagogies addresses part of the problem, she says, and the teacher should not have to choose between them.

One can also draw interesting parallels between the three prevalent pedagogies and the three predominant learning theories: grammar is a study of parts and logical sequences, suggesting associationist learning theory; free writing stresses wholes, ideas, and images, like cognitive theory; and improving student self-esteem has a decidedly humanistic orientation. Fortunately, the instructor may make profitable use of all three bodies of theory as well as all three methods.

Some additional insights are beginning to come to us through the literature on brain hemisphericity. What began a century ago as a purely physiological inquiry is now having an impact on learning theory. As this literature describes the two halves of the brain, the reader is struck by the similarity of left-brain functions (linear, sequential, logical, analytical) to the emphases in associationistic or S-R theory, and of the right-brain functions (intuition, patterning, holistic perceptions, images) to the emphases in cognitive theory.

Brandwein and Ornstein (1977) among many others, explain recent research findings that the right and left sides of the brain have different functions. Though this description oversimplifies, generally the left hemisphere controls the functions of language, rational cognition, and a sense of time--all sequential concepts. The right hemisphere controls intuitive thinking, spatial perceptions, holistic perceptions, and certain body activities such as painting and dancing. The left brain controls math and verbal skills; the right brain responds to rhythm, sounds, shapes, and colors.

Hunter (1976), Sperry (1975), Samples (1975), Galin (1976) and others point out that our educational system and society generally tend

to reward left-brained activities more than right-brained ones, and they plead for greater symmetry in development. "Show and Tell" is a good example of teaching toward both halves of the brain at once, through verbal and physical participation. Hunter (1976) stresses the need for continued practice with both kinds of skills so that one part of the brain does not become stagnant through disuse (for example, a person with dominant right hand and correspondingly dominant left brain can learn to type or play the piano equally well with both hands). She also points out that television is primarily a right-brained input system, enabling us to receive information without the complex left-brained processing that reading demands. This can be a blessing as a new avenue for learning, but it can also reduce the practice of using the left-brain verbal processes.

This knowledge may help us more accurately diagnose and treat learning problems. Renels (1976) believes that if children who are labeled "retarded" show drawing skills, they may be mislabeled as unintelligent whereas they are simply right-brain dominant. The incidence of dyslexia and specific learning disability is greater in left-handed persons (who are usually right-brain dominant), suggesting that they may learn differently than others do. Galin (1976) says there are cultural differences too; the middle class are likely to use the verbal-analytic mode; the urban poor are more likely to use the spatial-holistic mode. The cultural conflict may partially explain the difficulties of the urban poor in schools oriented toward the middle class.

It has been suggested that children learn language first through the right brain in holistic patterns, and many skillful writers know little about grammar. The widespread observation that students often

can talk very well even though they write badly gives credence to the idea that oral symbols are processed in a different way than are visual symbols. Asking students to read aloud, listening for the rhythms and structures of the oral language, is a technique being seriously advocated by instructors such as Joseph Collignon (1978) for improving punctuation skills and syntactic maturity in student writing. Quite likely, this approach utilizes the right brain with its perceptions of rhythm and its powerful imitative properties. O. Hobart Mowrer, (1960) a cognitive theorist, described the process of birds learning to talk through imitation rather than through trial-and-error, comparing it to the process of language learning in infants. The remarkable thing about human infants, however, is that once they get beyond the stage of imitating adult speech patterns, they begin generating similar speech structures of their own. (17:80) If the literature on hemisphericity is correct, both imitation and the generation of holistic speech patterns are right-brain activities. And if these processes are accessible to infants, they ought to be accessible to adults who do not function well in the analytic mode.

It is an exciting thought that by deliberately cultivating right-brain activity we may improve left-brain processes also. Denny Wolfe and R. W. Reising (1978) offer a number of suggestions for doing this, convinced that right-brain learning actually enhances left-brain learning. They also believe that the "affective domain" resides in the right hemisphere:

> A result of current brain research offers verification of the notion that sensitivity in teaching to what we have traditionally called the "affective domain" is immensely important. Since the right brain thrives on feeling and intuition, it is particularly attuned to body language, tone of voice, and what might vaguely be called "attitude." (26:30)

The emotional or affective side of learning is one that the remedial instructor cannot afford to ignore. He must deal constantly with the students who have been rejected, punished, or ignored into states of low self-esteem and/or anxiety. Symonds (1958) points out that the untrained teacher's first inclination is to handle the damaged student by further punishment, thus increasing anxiety and reducing performance. (25:35) It should be obvious, Symonds says, that giving a student directions as to what to do and how to do it should be more effective in guiding learning than telling him what not to do. The latter just sends him on a search for the correct response; the former informs him exactly what response is desired. Symonds also warns against a faulty assumption by many educators that learning is a process of absorbing knowledge. Quite the contrary. One learns what, and only what, one does. One learns the acts that are performed, the words that are repeated, or the feelings that are experienced. The implications for teaching are obvious, especially for low-verbal, right-brain dominant, or learning disabled students: let them learn by doing.

Even instructors who advocate grammar as a means of improving writing are linking recommendations to proven principles of learning theory. Martin Gliserman (1978) challenges the idea that grammar has limited usefulness in writing instruction, but even he recommends that students must be active rather than passive learners, that red marks on papers should be avoided because they tend to make students negatively self-conscious, that the grammar studied must be related to the students' own writing, and that it must not consume too much classroom time. Though he acknowledges that grammatical facility will not guarantee a student's being able to solve complex academic-cognitive tasks, he believes it

will cut down on the spiraling anxiety which often accompanies those tasks when this facility is absent. Thus he draws from the work of learning theorists in his concern for active over passive learning, meaningful over irrelevant activities, positive self-image over negative, and confidence over anxiety.

Similarly, in the following recommendations by Mina Shaughnessy for reducing errors, one can see application of the principles of positive feedback, affective learning, development of good self-image, reasonable goal setting, and the conquest of anxiety:

> The teacher must encourage an aggressive attitude toward error and then provide a strategy for its defeat, one that allows the student to count his victories as he goes and thereby grow in confidence. This means letting the student in on what is happening--setting a reasonable limit to what he needs to accomplish (the reduction of errors per 300 words from 15 to 6 in one semester, for example), helping him classify the kinds of errors he makes most often (the discovery that although he has 20 errors he has only 5 problems is in itself encouraging to a student), and then planning instruction so that success is built into each lesson and the student can see that he is finally beginning to cope with errors. (21:127)

Ignoring error, she says, is likely to increase rather than diminish a student's anxiety:

> The alternative course of ignoring error for fear of inhibiting the writer even more, or of assuming that the errors will wear off as the student writes more, is finally giving error more power than it is due. The "mystery" of error is what most intimidates students--the worry that errors just "happen" without a person's knowing how or when.... Freedom from error is finally a matter of understanding error, not of getting special dispensations to err. (21:127)

It should be noted that Shaughnessy's attitude toward errors is realistic and constructive; she sees error not as something wrong with the student, but as something standing in his path toward self-fulfillment. Her goal is not to demean students by pointing out flaws, but to help them rid themselves of an obstacle. That is also the philosophy governing this practicum.

PROCEDURES

The study was descriptive and analytical. It examined writing samples of fifty students who have been admitted into the Bakersfield College special program for learning disabled students in the past two years. The analysis of writing problems evidenced by these students constitutes a description of one aspect of their behavior toward which remedial efforts should be directed.

Since the special program has only been in effect for two years, and since the instructor has been limited by law to thirty students or fewer at any one time, the population of fifty students represents the entire population for whom data are available. Therefore, randomizing the sample was not necessary. For purposes of generalizing to a population of future enrollees in the program, however, it must be assumed that these fifty students are as representative of the larger population of learning disabled students as is possible to find in an educational setting.

All writing samples represent the student's capacities at or near his entrance into the program. This makes the sampling more uniform and more valid, since the study has attempted to ascertain what skills most students need rather than what they have acquired after treatment.

Research questions addressed may be stated as follows: (1) Given a topic with which he is familiar, how many words does the average student write in a 40-minute period upon entrance into a program for learning disabled students? (2) How many errors, and what kind of

errors, does the average student make on this assignment? (3) What is the ratio of errors per 100 words of writing?

Several limitations must be acknowledged. (1) The size of the sample is small due to the limitations of the program. (2) Findings may be somewhat distorted by the fact that not all students entering the program for learning disabled students need help with writing; some come only for help with mathematics, and their writing may be considerably better than that of some peers in the program. (3) The study was limited to analysis of writing problems related to sentence structure and punctuation; it did not include such admitted weaknesses in student writing as vagueness, vapid content, poor organization, faulty paragraphing, lack of transitions, etc. Specifically, it was limited to assessing fluency, omissions of words and word endings, improper noun plurals, confusing sentence structure, subject-verb agreement, problems with verb forms or tenses, faulty pronoun reference, shifts in person (e.g. from I to you), fused sentences or comma splices, fragments, punctuation, usage or wrong word, and spelling/miswriting/apostrophe errors. (4) The above groupings constitute, in some cases, rather large categories which might be analyzed in greater detail, but which were considered sufficient for purposes of this study. (5) The nature of the topic assigned to most of the students ("Describe a Tree") may have had the virtue of drawing upon a common experience, but it may give a distorted picture of errors such as shifts in tense or person, which are more likely to appear in narrative writing than in descriptive writing. (6) The emphasis on error in the study may appear to be rather negative, not acknowledging such strengths as imagination, humor, and effective use of details.

However, in actual instructional practice, much praise is given for such positive attributes, and the student is rewarded for increased fluency over a period of several weeks before any attempt is made to deal with elimination of error. Then a gradual shaping begins, with praise given for reduction of one kind of error, then another, and so on. Most students make remarkable progress under this system, so the apparent emphasis on error is not as negative as it might appear.

This study makes certain assumptions also. (1) It is assumed that the population studied is similar in important ways to the population of future enrollees in the program. This assumption enables the instructor to plan certain kinds of learning strategies and exercises and materials which are likely to be needed by future enrollees. (2) It is assumed that the primary goal of remediation is improved ability to communicate with others, not merely self-expression on paper. Thus the elimination of error becomes a useful skill toward that end. (3) It is assumed that, in addition to needing warm acceptance of themselves as persons, remedial students are concerned with error and want to learn to conquer it. (4) The grouping of certain kinds of errors for the sake of simplicity in counting them carries certain assumptions with it--that these errors are closely related and that they would respond to similar strategies of remediation. (5) The counting of spelling errors assumes repeated identical misspellings to be only one error. Although this is not entirely consistent with the counting of other types of errors (two fragments counted as two errors), it is nevertheless assumed that a truer picture emerges of how serious a problem the student has with spelling.

The results of the analysis have been compiled and put into the form of a table, which may be seen in the section titled "Results."

RESULTS

The fifty papers analyzed registered a total of 5,064 words, or an average of 101.3 words written by each student. The range of fluency (determined by a simple word count) was from 18 words to 300. The total error count came to 539, or an average of 10.78 errors per paper. When converted to a ratio of number of errors per 100 words, the figure decreased slightly to 9.4 errors per 100 words of writing. A detailed tabulation of the types of errors and the frequency of distribution appears in Table 1, on the following two pages.

Some general observations may be made from the table. The most obvious common weakness is the lack of fluency. Although the average number of words written was 101, 28 of the 50 students wrote fewer than 100 words, and 12 of them fewer than 50 words. The second striking observation is the high ratio of errors to words written—over 9 errors per 100 words of writing. These findings are comparable, however, to those of the Lunsford study. Lunsford's 92 students, in a 50-minute period, ranged from 46 words to 301 words with an average of 136. Errors averaged 1 for each 8 words written. Since her experimental group had all scored below 10 on the A.C.T. test, they may be considered comparable in skills and/or abilities to the population studied in this practicum. Another comparison might be made to Mina Shaughnessy's students (21:122) who at the beginning of instruction average between 10 and 30 errors in a 300-word essay. From this data, it would appear that Bakersfield College students who manifest writing disabilities do not differ greatly from comparable groups in New York or Ohio.

Table 1

Analysis of Errors in Writing Samples

Student number	Fluency (total words)	Omission of words	Omission, end letters	Noun plurals, improper	Confusing Syntax	Verbs—agreement	Verbs—tense, wrong form	Pronouns—ref., case	Pronouns—shift, person	Fused/spliced sentences	Fragments	Punctuation—end marks	Other Punct. & capitals	Usage and wrong word	Spelling, miswriting, & apostrophe errors	Total errors in paper
1	28	1	1	-	1	1	1	-	-	-	-	1	2	-	2	10
2	80	-	-	-	1	-	-	1	-	3	-	1	2	-	8	16
3	18	-	-	-	-	-	-	-	-	1	-	1	1	-	3	6
4	51	-	-	-	-	-	-	-	1	-	-	-	1	-	3	5
5	185	1	1	-	1	-	1	-	-	-	-	-	-	1	-	5
6	62	-	-	-	-	-	-	-	-	5	-	-	-	-	1	6
7	111	2	1	-	1	-	2	-	-	3	1	1	-	5	2	18
8	63	1	-	-	1	1	-	-	-	1	-	-	-	-	3	7
9	95	-	1	-	2	-	-	-	-	2	-	3	7	-	4	19
10	92	2	-	-	1	2	-	-	-	1	-	1	1	-	-	8
11	17	1	-	-	1	-	1	-	-	-	-	1	-	1	-	5
12	86	1	-	-	2	-	1	-	-	1	1	-	-	2	1	9
13	99	-	-	-	2	-	-	-	-	-	-	-	-	1	2	5
14	82	-	-	-	1	1	-	-	-	-	-	-	1	-	-	7
15	79	-	1	-	-	-	-	1	-	2	-	-	3	-	-	7
16	18	-	-	-	-	-	-	-	-	-	1	1	2	-	-	4
17	34	1	1	-	1	-	-	-	-	2	-	1	1	1	2	10
18	20	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2
19	36	-	-	-	2	-	-	-	-	-	-	1	1	-	1	5
20	33	1	1	-	1	-	1	-	2	-	1	-	1	-	2	10
21	120	1	-	-	1	-	-	-	-	6	-	1	1	-	3	13
22	300	2	1	-	-	-	-	-	2	-	-	-	1	3	1	10
23	39	2	-	-	1	-	-	-	-	1	-	-	-	-	1	5
24	136	1	2	-	1	1	1	-	-	1	-	-	2	3	2	14
25	104	-	1	-	1	-	-	-	-	1	-	1	-	-	1	5
26	156	2	-	-	2	-	-	3	-	-	1	1	-	4	1	14
27	197	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2
28	45	1	-	-	1	-	-	-	-	-	-	-	2	1	-	5
29	113	1	4	1	-	5	1	2	1	-	-	-	1	8	5	29
30	112	2	1	-	2	-	-	-	-	3	1	1	1	-	2	13

Table 1 (continued)

Student number	Fluency (total words)	Omission of words	Omission, end letters	Noun plurals, improper	Confusing syntax	Verbs—agreement	Verbs—tense, wrong form	Pronouns—ref., case	Pronouns—shift, person	Fused/spliced sentences	Fragments	Punctuation—end marks	Other punct. & capitals	Usage and wrong word	Spelling, miswriting, & apostrophe errors	Total errors in paper
31	109	1	-	-	-	-	-	-	-	-	1	-	-	-	4	6
32	56	-	2	1	3	-	-	-	-	-	-	-	-	-	4	10
33	136	2	-	-	-	-	-	-	-	-	-	3	2	2	3	12
34	154	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
35	165	2	-	-	6	-	-	2	2	-	-	-	1	1	-	14
36	27	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2
37	277	2	-	2	2	2	1	1	1	3	1	-	3	1	6	25
38	134	2	5	-	1	1	-	-	-	2	-	3	2	1	6	23
39	47	-	3	-	1	3	-	1	1	1	-	1	1	2	2	16
40	98	2	2	-	1	-	-	-	1	3	-	-	-	-	4	13
41	153	3	-	2	-	2	-	1	-	1	3	-	2	1	10	25
42	236	-	-	-	1	-	-	1	1	-	1	-	4	-	18	26
43	65	-	1	-	1	-	-	-	-	1	-	2	1	-	4	10
44	141	-	2	-	1	2	-	3	-	3	-	-	2	-	4	17
45	57	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
46	64	-	-	-	-	-	-	-	-	3	1	2	4	1	4	15
47	84	1	-	-	-	1	-	-	-	1	-	1	1	2	8	15
48	150	1	1	-	2	1	-	1	-	-	1	-	3	1	2	13
49	102	-	-	-	-	-	1	-	-	1	-	-	4	-	4	10
50	198	1	1	-	1	-	-	-	-	-	3	1	1	-	3	11
Totals:		40	33	6	47	24	11	17	12	53	19	29	64	44	140	539
Distribution of Errors (i.e., number of papers in which error occurred)		27	20	4	32	14	10	11	9	26	14	21	33	21	38	50

Fluency range: Minimum of 18 words, maximum 300. Average: 101 words.

Average errors per paper: 539/50= 10.78. Average per 100 words: 9.4

The most common errors were in spelling/miswriting/apostrophe, punctuation/capitalisation, and fused/spliced sentences categories. These findings compare with those of Higgins, whose list of errors ranked all the above in the top ten, though his list was more detailed. Least frequently made errors in this practicum were improper noun forms (e.g. *moneys*), errors in verb forms, and problems with shifts in personal pronouns. It may not be inferred, however, that this population has mastered verbs and pronouns. Had the students been given a narrative assignment rather than a descriptive one, more of these types of errors would probably have occurred.

Another interesting observation may be made regarding the distribution of errors. All errors in the table occurred in at least some of the papers, though not every student made every kind of error. Spelling and apostrophe errors occurred in 38 of the 50 papers; punctuation errors in 33 papers; confusing syntax or sentence structure in 32. Although fused sentences and comma splices accounted for 53 of the 539 errors, or 10%, they appeared in only 26 of the 50 papers. It would appear that students who make these types of error tend to make them repeatedly.

Though much individual variation is evident in the types of errors made by different students, those who tended to omit words and word endings tended also to manifest difficulties with spelling, miswriting, and substitution of wrong words. No direct causal relationship can be inferred, of course, but these findings certainly call for an investigation by the instructor to determine whether there is indeed some relationship between these different types of error for a given student.

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The findings of this study corroborate the findings of other practitioners who deal with seriously underprepared students—that the fluency is low, the error ratio high, the sentence structure unconventional, the vocabulary generally impoverished, in the writing of considerable numbers of college students today. We are faced with a good many "adult beginners," as Mina Shaughnessy puts it (22:317) who are similar to adult beginners in piano or tennis: they are unskilled, but there is every reason to believe that they are teachable.

The findings bear out the contention of Shaughnessy, D'Eloia, and Higgins that students need more training in the skill of proofreading. Improved perception—seeing exactly what he has or hasn't written down—would enable students to improve in at least four categories—omission of words, omission of end letters, spelling, and use of wrong words. It could probably help in at least six or seven others, too, including confusing syntax which the student himself, upon reading his paper aloud, can recognize as not making sense. The advice of Collignon to read aloud, not only the student's own work, but other writing as well until the rhythms of the language can be detected by the ear, seems well worth taking.

Five of the fourteen categories of error may be treated without any knowledge of formal grammar, and these account for 263 of the 539 errors, or a total of 49%! These categories are omission of words, omission of end letters, noun plurals, usage and wrong word, and spelling/miswriting. This finding certainly casts doubt upon the tradi-

tional remedy of dosing remedial students with protracted study of abstract grammatical principles. And if the current literature in the areas of composition, learning theory, and brain hemisphericity is to be believed, students will probably profit more from sentence combining, copying whole passages, and free writing techniques than they will from grammar workbooks, segmented drills, and memorization of difficult grammatical terminology.

The lack of fluency may be explained in various ways. It could reflect a general poverty of experience so that the writer feels he has nothing to say, although that feeling certainly can be generated equally well by low self-esteem. It may be due to undeveloped psychomotor coordination simply because the student has had so little practice. Mina Shaughnessy says that the single most important fact about basic writing students is that they have been writing infrequently and then only in artificial situations:

> Compared to the 1,000 words a week that a British student is likely to have written in the equivalent of an American high school, or even the 350 words a week that an American student in a middle-class high school is likely to have written, the basic writing student is more likely to have written 350 words a semester. (21:14)

The answer to that problem, she says, is practice and more practice, in modes that encourage a free flow of words (such as journals or observations) until the pen seems an extension of the hand, and the hand of the mind itself.

Another explanation may be anxiety. Students who have had painful experiences with writing are likely to avoid it, as learning theorists have well established. Punishment for errors in the past may have led to anxiety, which may then have generalized to anxiety over anything

associated with the writing process or even the entire academic environment. Moreover, anxiety has been shown to result in stereotypic or repetitive behavior--doing over and over again the only thing that the learner feels he can do. The anxious student may reason that the fewer words he puts on paper, the fewer errors he can make, and thus the lower the likelihood of punishment. This kind of anxiety can be treated in several ways--by conveying warm and friendly acceptance of the student as a person, by encouraging him to write freely for some time without criticism, and by encouraging him to think of writing as something which is developed by stages, rewarding him for a series of drafts of his paper rather than just for the final product. It is also logical to expect that anxiety can be reduced by effective strategies for coping with error so that the student can see his own improvement and know that it is attributable to his own efforts.

For those writing problems which do require some knowledge of grammar, instructors are well advised by the literature to keep it tied directly to students' writing, to keep it brief, and to keep the terminology as simple as possible. Sentence-combining techniques and the generation of more complex structures from a simple core sentence are also recommended as alternatives to grammatical analysis.

Efforts should be made to develop materials which teach to both halves of the brain at once--the wholes and the parts, the details and the generalizations, the words and the images. Although this recommendation comes more from the review of the literature than from the findings of the study, it should be recognized as a potentially fruitful means of reaching students who are not adept at grammatical analysis.

Recommendations may be summarized as follows: (1) that more attention be given to developing general proofreading skills in basic writing students; (2) that fluency be encouraged through such activities as controlled composition exercises (in which the student manipulates passages to develop one skill at a time), free writing, ungraded writing, and journal writing; (3) that students be encouraged to read aloud more, both as an aid to proofreading and a means of developing a sense of rhythm and structure in English sentences; (4) that the study of grammar be subordinated to the elimination of error in students' work; (5) that sentence-combining and sentence-generating techniques be used as an alternative to grammatical analysis; (6) that any grammatical principles taught should detract as little as possible from actual writing practice and be kept as simple as possible; (7) that students be rewarded for a series of improving drafts rather than just for the finished product; and (8) that materials be developed which will facilitate the use of both hemispheres of the brain in language learning.

The author hopes to pursue these recommendations further in her major applied research project for her doctoral program at Nova University. She intends to develop controlled composition materials which will give students writing practice, proofreading experience, and sentence-combining practice, using a minimum of grammatical terminology and teaching only those concepts of grammar which are most likely to be of immediate benefit to the student. The findings of this study will be of great value in making certain that the proposed materials treat the actual writing problems of the students, and that they give highest priority where the greatest needs exist.

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